

FIGURE 1

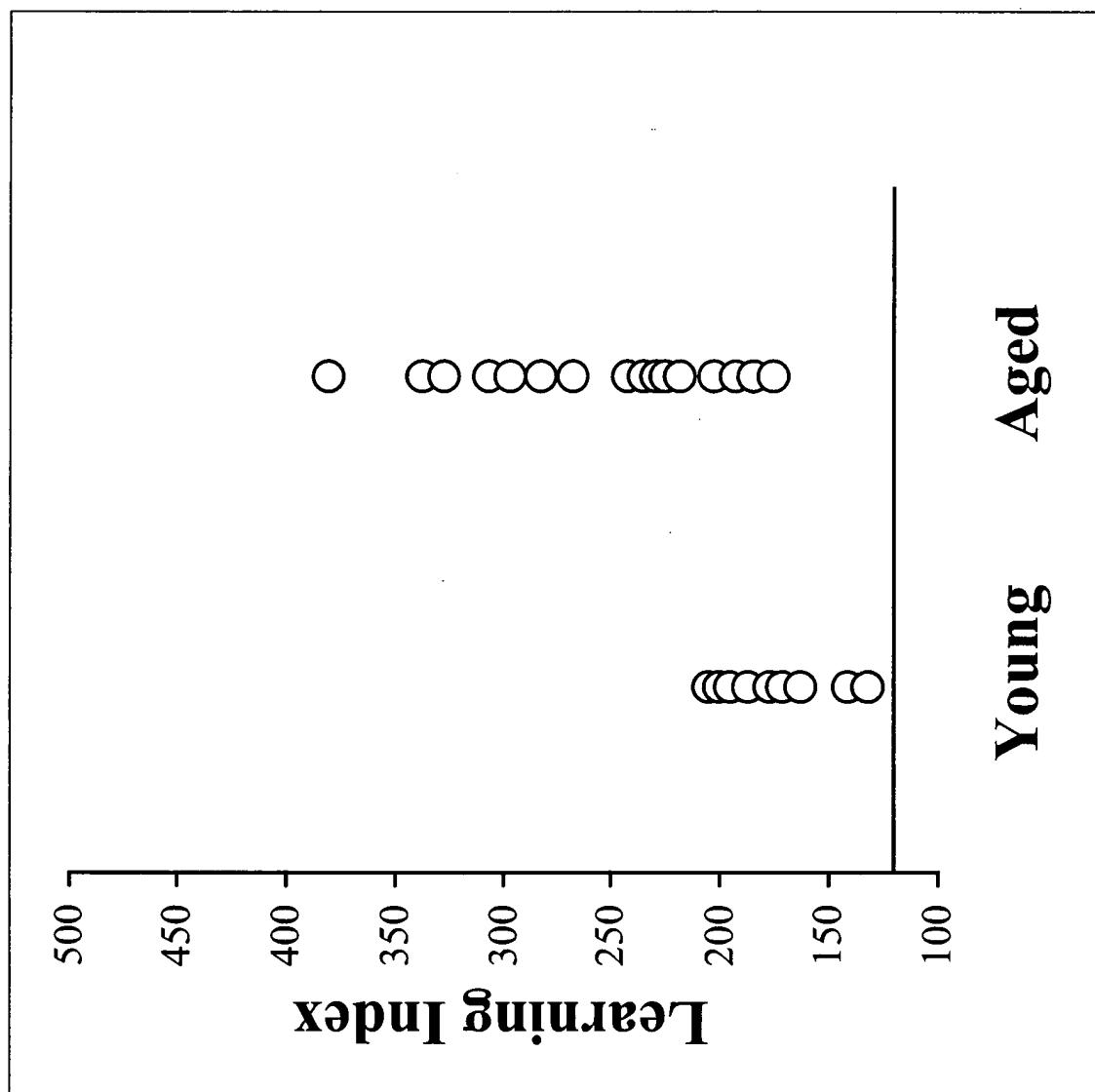


FIGURE 2

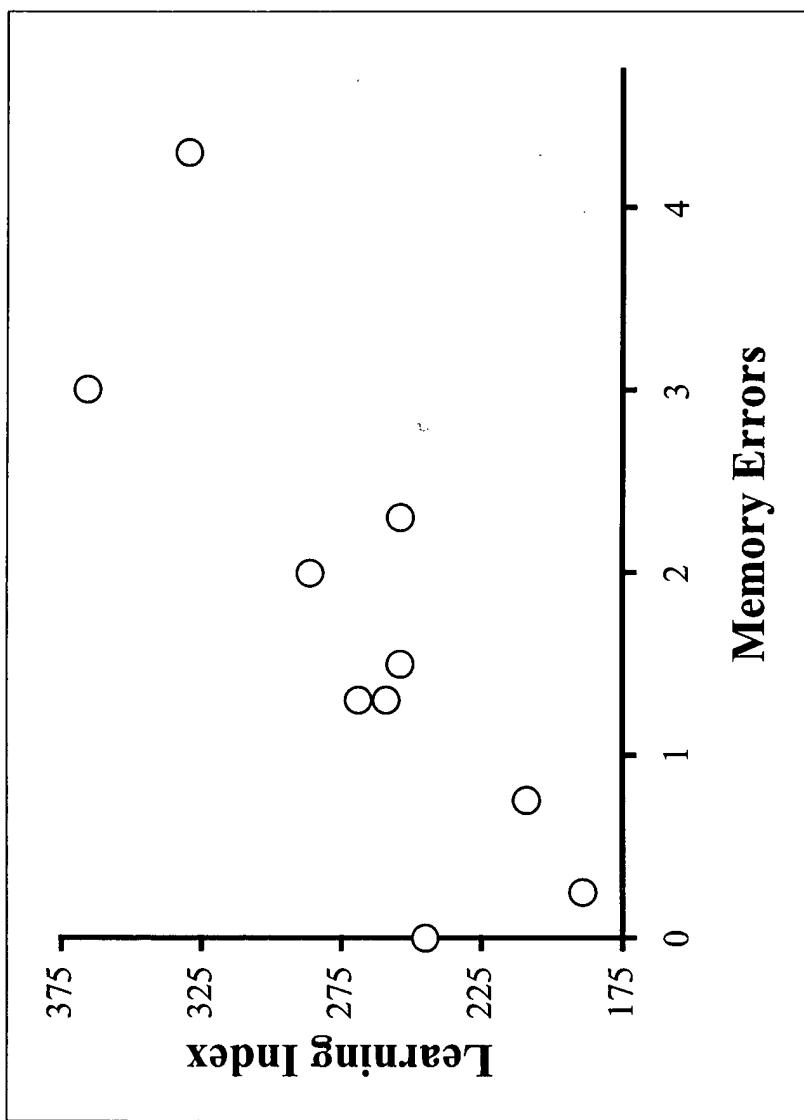


FIGURE 3

Distribution of Mammalian Glutamate Transporters and Their Human Homologues*

Glutamate Transporter	Human Homologue	NCBI Locuslink	Cell Type	Distribution
GLAST	EAAT1	SLC1A3	Astrocytes	High expression in cerebellum; Less in brain and spinal cord
GLT-1	EAAT2	SLC1A2	Astrocytes (Neurons) **	Widespread throughout brain and Spinal cord
EAAC1	EAAT3	SLC1A1	Neurons	Hippocampus, cerebellum, basal ganglia
EAAT4	EAAT4	SLC1A6	Neurons	Purkinje cells of cerebellum
EAAT5	EAAT5	SLC1A7	Neurons	Retina

* GLAST indicates astrocyte-specific glutamate transporter; EAAT1, excitatory amino acid transporter 1; GLT-1 glutamate transporter 1; EAAT2, excitatory amino acid transporter 2; EAAT3, excitatory amino acid transporter 3; EAAT4, excitatory amino acid transporter 4; EAAT5, excitatory amino acid transporter 5.

** Note that one splice variant GLT-1 α is expressed preferentially in astrocytes and another GLT-1 β is expressed preferentially in neurons (Schmitt 2002 Neuroscience 109 45-61).

GLUTAMATE REGULATION: Microarrays

Gene	AU	Y+AI	Effect Size	p Value
U15098_at	337.63* ± 8.2	257.62 ± 7.9	5.87	0.0007
GLTI				
S59158_at	4693.87* ± 165.58	4228.57 ± 135.6	1.93	0.076
GLAST				
AF038571	732.4 ± 35.73	655.58 ± 23.92	ns	0.112
EAAC1				
rc_A1227705_at	604.63* ± 18.91	482.32 ± 21.25	3.53	0.007
PACAP				
J04171_at	3287.73* ± 14.86	3055.23 ± 55.9	2.58	0.025
aspartate aminotransferase				

* No overlap between probe set values for AU and all probe set values for Y and AI

'No overlap between values for AU and values for AI

FIGURE 4

GLUTAMATE REGULATION: In Situ Hybridization Assays

Gene	AU	Y+AI	P Value
GLT	2.46 ± .095	.221 ± .04	p < .03
GLAST	.263 ± .016	.228 ± .009	p < .10
EAAC1	0.368 ± .034	.304 ± .028	ns

FIGURE 5

FIGURE 6

